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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,539	10/23/2003	Ulrich Augustin	08050001US	9110
7055	7590	08/01/2005	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			PALABRICA, RICARDO J	
			ART UNIT	PAPER NUMBER
			3663	

DATE MAILED: 08/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/690,539

Applicant(s)

AUGUSTIN, ULRICH

Examiner

Rick Palabrica

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 3-7, 9-11, 13, 15, 16, 20, 25, 28, 29, 34, 37-39 and 42-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8, 12, 14, 16-19, 21-24, 26, 27, 30-32, 35, 36, 40 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election with traverse of Group A, Fig. 1 in the reply filed on 5/31/05 is acknowledged. Based on said election, claims 1, 2, 8, 12, 14, 16-19, 21-24, 26, 27, 30-32, 35, 36, 40, and 41 read on the elected invention.

The traversal is on the ground(s) that a) an MPEP 803 requirement has been "omitted" in the restriction requirement, i.e., that "an appropriate explanation must be advanced by the Examiner as to the existence of a 'serious burden' if the restriction requirement were not required". Underlining provided; and b) the search for each group and species is substantially the same. This is not found persuasive because: a) the previous Examiner meets the MPEP 803 guidelines on restriction because he has shown in the previous Office Action that the two groups have acquired a separate status in the art by their different classification; and b) there are seven species in each group, each species having mutually exclusive characteristics from the other species, and the search for one species is not co-extensive of the search of the other species.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. The specification is objected to under 35 U.S.C. 112, first paragraph, as failing to provide an adequate written description of the invention and as failing to adequately teach how to make and/or use the invention, i.e., failing to provide an enabling disclosure.

There is neither an adequate description nor enabling disclosure as to how and in what manner Applicant's invention would be operative to produce nuclear fusion reactions utilizing the structures and arrangements set forth in any of the Applicant's claims.

Note that a disclosure in an application, to be complete, must contain such description and details as to enable any person skilled in the art or science, to which the invention pertains, to make and use the invention as of its filing date, *In re Glass*, 181 USPQ 31.

It is not clear from the disclosure that the system would be operative to create and maintain the indicated pressure waves oscillating with its natural frequency, and that said waves will heat the gas to nuclear fusion temperatures.

Specific operative embodiments or examples of the invention must be set forth. Examples and description should be of sufficient scope to justify the scope of the claims. See MPEP 608.01(p).

For example, the disclosure is insufficient and non-enabling in failing to indicate the working fluid parameters (e.g., required purity and homogeneity), the fusion gas parameters (e.g., ratio of the deuterium-tritium-oxygen gas to water, the required purity of the individual gases and their ratios to each other) necessary to produce the

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indicated oscillating waves and to cause nuclear fusion of the fusion gas (referred to at the bottom of page 17 of the specification or at the top paragraph of page 25).

As presently set forth, Applicant's power and control unit, "C", and conditioner, "C1", are EACH essentially a "black box" with no description of the internals thereof. The disclosure is insufficient in failing to set forth in an adequate and sufficient fashion, a description of these two systems that would enable each one to perform its intended function. If the applicant is of the opinion that there is a description in the prior art (in the form of literature, etc. having a date prior to the filing date of this application) of the internals of EACH of these black boxes, copies of said literature, etc. must be submitted for appropriate review by the Office. See *In re Ghiron et al.*, 169 USPQ 723, 727.

The specification indicates that the actuators and control unit set the system in oscillation at its natural frequency (see page 10, lines 1+) and the fusion of deuterium and tritium causes amplification of the outgoing pressure wave (but provides no reputable basis for this unsupported "conclusion"). It would instead appear that any fusion reactions (if indeed they take place) would disrupt the wave oscillations at the natural frequency, and thus extinguish or prevent any further fusion reactions from taking place and thus making the Applicant's invention inoperative.

3. Claims 1, 2, 8, 12, 14, 16-19, 21-24, 26, 27, 30-32, 35, 36, 40, and 41 are rejected under 35 U.S.C. 112, first paragraph, for the reasons set forth in the objection to the specification in section 2 above.

Claim 1 recites the limitation, "at least one pressure wave in the working fluid such that an amplified pressure wave deforms the actuator to generate electrical energy." There is neither an adequate description nor enabling disclosure as to how and in what manner a single (i.e. ONE) pressure wave alone can: a) produce oscillation of the claimed system at its natural frequency, given that oscillation is a constant, steady state process resulting, e.g., from standing waves; b) generate electrical energy, given that the specification indicates that the electrical energy, which Applicant's claimed invention alleges to generate, is like the electrical energy commonly produced by power plants via power input/output lines. Electrical energy from power plants represent a steady source of power and not a one-time, one-wave, energy pulse.

Claim 24 recites the limitation of "calibrated deuterium-tritium gas bubbles." There is neither an adequate description nor enabling disclosure as to what is all encompassed by the term/phrase, "calibrated deuterium-tritium gas bubbles."

4. Claims 1, 2, 8, 12, 14, 16-19, 21-24, 26, 27, 30-32, 35, 36, 40, and 41 are rejected under 35 U.S.C. 112, first paragraph, for the reasons set forth in the objection to the specification in section 2 above.

5. Claims 1, 2, 8, 12, 14, 16-19, 21-24, 26, 27, 30-32, 35, 36, 40, and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The claims are vague, indefinite and incomplete as to how and in what manner a single pressure wave alone can generate the so-called "electrical energy" (see claim 1). Thus, the metes and bounds of the claims cannot be determined.

Claim 1 recites the limitation "means for amplifying at least one pressure wave in the working fluid." There is no proper antecedent for the term/phrase "the working fluid". Note that so-called working fluid is not positively recited in the previous parts of the claim.

Claim 21 recites the limitations "one or more pressure sensors" and "control and power unit." There are no proper antecedents for said elements.

Claim 24 is vague, indefinite and incomplete, and its metes and bounds cannot be determined, particularly in regard to the term/phrase "calibrated deuterium-tritium gas bubbles." It is not known what all is meant by or encompassed by this term/phrase.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1, 2, 8, 12, 14, 16-19, 21-24, 26, 27, 30-32, 35, 36, 40, and 41 are rejected under 35 U.S.C. 101 because the invention as disclosed is inoperative and therefore lacks utility.

The reasons why the disclosed invention is inoperative are the same as the reasons why the specification is objected to (see section 2 above) and said reasons are accordingly incorporated herein.

There is no reputable evidence of record to indicate the invention has been reduced to a point of providing in current available form, an operative system for producing nuclear fusion reactions utilizing a system set forth in any of Applicant's claims. The invention is not considered as meeting the requirements of 35 U.S.C. 101 as being "useful".

Applicant, at best, has set forth what may be considered a concept or an object of scientific research. However, it has been held that such does not present a utility within the meaning of 35 U.S.C. 101. See Brenner v. Manson, 148 USPQ 689.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 12, 14, 16, 17, 19, 27, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Enfinger (U.S. 2004/0141578 A1) or under 35 U.S.C. 102(b) as being anticipated by any one of Laberge (WO 03/077260 A2) or Putterman et al. (U.S. 5,659,173) or Symons (WO 03/0344441 A1).

Enfinger discloses a nuclear fusion reactor (e.g., see Figs. 1-3 and paragraphs 0030 and 0031) comprising: a) a reactor 10 having a substantially spherical body; b) at least one actuator (piezoelectric transducer 42; c) means for amplifying pressure waves (e.g., fusion energy or laser energy. See paragraph 0041).

Laberge discloses a nuclear fusion reactor (e.g., see Figs. 1-5) comprising: a) a reactor 10A having a substantially spherical body; b) at least one actuator (pneumatic-mechanical system – see paragraph 0032; c) means for amplifying pressure waves (e.g., thermonuclear fusion energy. See paragraph 0040).

Putterman discloses an apparatus for converting acoustic energy into an energy of different form including fusion (e.g., see Abstract, col. 1, lines 49+ and Figs. 1-23) comprising: a) a substantially spherical body SL (see Fig. 22; b) at least one actuator (piezoelectric transducer PZT); c) means for amplifying pressure waves (e.g., fusion energy).

As to the claim limitation, “actuator contained by the spherical body”, note that part of the left PZT shown in Fig. 22 in Putterman is within the spherical body SL. While patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of the claims.

See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

Symons discloses a nuclear fusion reactor (e.g., see Figs. 10) comprising: a) a substantially spherical body, comprising the combination of elements 29, 30 and outer shell of 31; b) at least one actuator (explosive material); c) means for amplifying pressure waves (e.g., fusion energy. See Abstract).

The claims are replete with statements that are either essentially method limitations or statements of intended or desired use. For example, "to contain working fluid ...", "to generate at least one pressure wave...", "such that an amplified pressure wave deforms the actuator to generate electrical energy," etc. These clauses, as well as other statements of intended use or clauses that denote the result of a method step, do not serve to patently distinguish the claimed structure over that of the reference, as long as the structure of the cited references is capable of performing the intended use. See MPEP 2111-2115.

See also MPEP 2114 that states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531.

[A]pparatus claims cover what a device is, not what a device does."
Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528.

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

Any one of the systems in the cited references is capable of being used in the same manner and for the intended or desired use as the claimed invention. Note that it is sufficient to show that the capability exists.

As to claim 14, there are inherently free oxygen atoms in the atmosphere or in the working fluid of the apparatus in the cited references to generate at least one deuterium-tritium-oxygen gas bubble in the system.

As to claims 16, 17, 19, 27, the limitations recited are process limitations and not apparatus limitations, which do not carry patentable weight because the claims are directed to an apparatus. See above clarification on this matter.

8. Claim 2 is rejected under 35 U.S.C. 102(e) as being anticipated by Enfinger or under 35 U.S.C. 102(b) as being anticipated by Putterman et al.

9. Claim 8 is rejected under 35 U.S.C. 102(e) as being anticipated by Enfinger. Note that actuator 42 is embedded between an inner wall 22A and 22B (see Fig. 1).

10. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Putterman et al.

11. Claim 21 is rejected under 35 U.S.C. 102(e) as being anticipated by Enfinger or under 35 U.S.C. 102(b) as being anticipated by Laberge. See controller 116 in Laberge (also paragraph 0057) or master controller 40 in Enfinger.

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12. Claims 22-24, 26, 31, 35, 36, 40, and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by either one of Laberge or Enfinger.

Applicant's claim language reads on Laberge as follows: a) "control and power unit" reads on controller 116; b) "conditioning system" reads on the combination of reservoir 22 and valve 26 (see, for example, Fig. 1 and paragraphs 0026 and 0027).

Applicant's claim language reads on Enfinger as follows: a) "control and power unit" reads on controller 40; b) "conditioning system" reads on the system for controlling the fusible gas into and from the chamber (see, for example, Fig. 1 and paragraph 0036).

Again the claims are replete with statements of intended use or process limitations that do not serve to patently distinguish the claimed structure over Laberge, e.g., "uses one or more pressure sensors ...", "activating the at least one actuator", "providing stable pressure and temperature conditions ...", etc. See section 7 above.

13. Claim 32 is rejected under 35 U.S.C. 102(e) as being anticipated by Enfinger.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References C and D further illustrate prior art.

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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrica whose telephone number is 571-272-6880. The examiner can normally be reached on 6:30-5:00, Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RJP
July 26, 2005

R Palabrica